



Laboratory Safety Committee

Electrical Safety Subcommittee

ESS D2006-6 05-Jun-2006

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ESS Determination # D2009-1 October 12, 2009

Qualifications for operating a circuit breaker as a switch, 277 volts and below

This subject was addressed in ESS Determination D2006-3 (March 6, 2006) "Does a person need to be Qualified to operate a circuit breaker." The recommendation below is an update to determination D2006-3 and applies only to the operation of a circuit breaker as a switch at 277 volts AC and below.

The most common application of this is for controlling lighting fixtures in some older buildings and warehouses at Fermilab. These circuit breakers are in lighting panel boards (LP) around Fermilab and will be operating at 277 volts or less. NFPA 70E considers the operation of such a circuit breaker as having a Hazard Risk category of 0. In this case the committee decided that formal 70E training would not be required for this action as long as the employee understands the hazards and follows the required PPE.

The committee recognizes that individuals involved in this activity are a small subset of the overall lab employees and would require they contact their electrical coordinator to be verbally briefed on the hazards of operating a circuit breaker as a switch and be instructed in the required PPE.

- PPE Class 0 required to operate circuit breaker as a switch
- Applies to 277 volts AC and below
- PPE requirements are long sleeve natural fiber shirt, natural fiber long pants, hearing protection, & safety glasses.

The committee also noted that circuit breakers used frequently as switches should be switch rated.